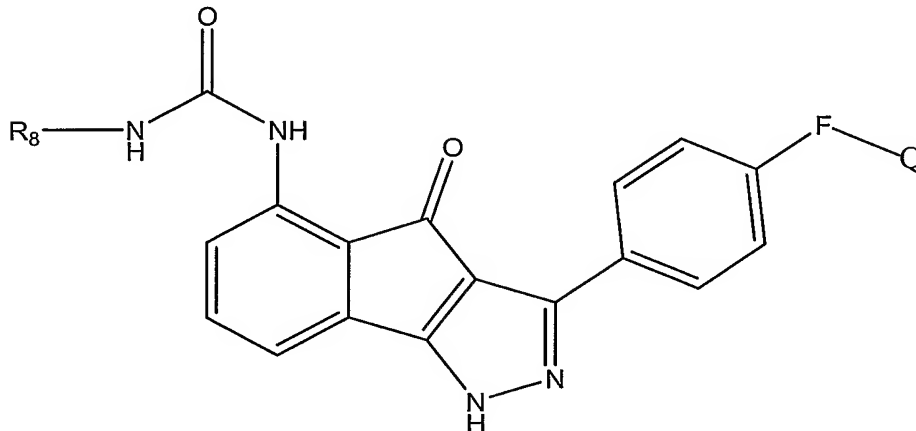


**Claims:**

1. A compound having the structure of Formula I, or an isomeric, prodrug, tautomeric, pharmaceutically acceptable salt, N-oxide, and/or stereoisomeric form thereof:

5



wherein

R<sub>8</sub> represents a substituted or unsubstituted heterocycle,

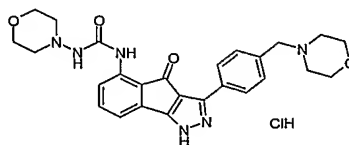
10 F represents (CH<sub>2</sub>)<sub>n</sub>, where n is an integer between 1 and 6; and

Q represents a substituted or unsubstituted secondary amino substituent, substituted or unsubstituted tertiary amino substituent, or substituted or unsubstituted nitrogen-containing heterocycle;

provided that the following compounds are excluded:

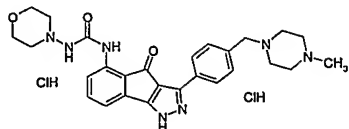
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**A47**

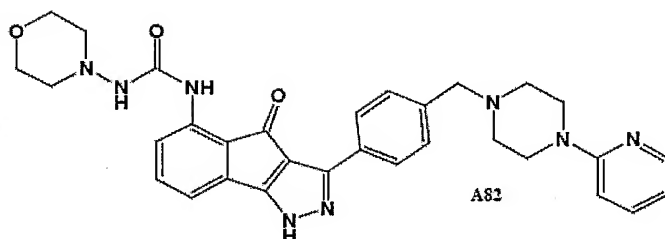
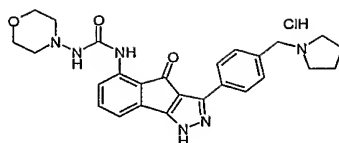


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**A49**



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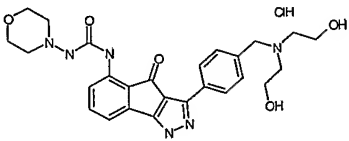
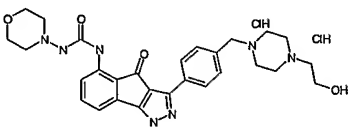
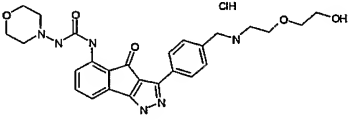
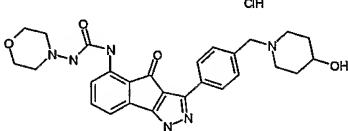
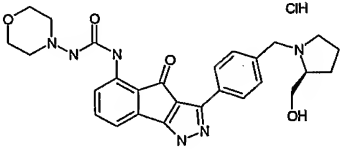
**A51**

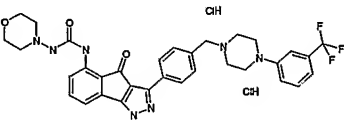
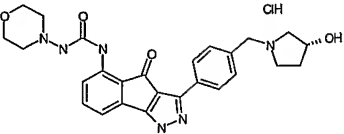
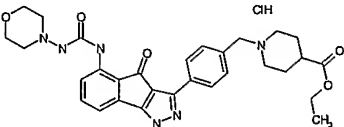
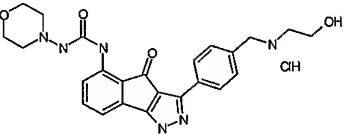
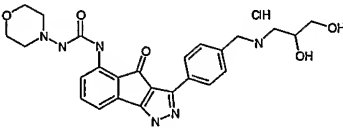
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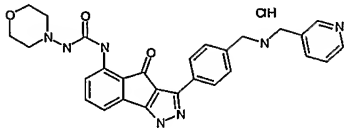
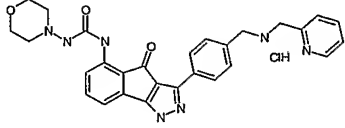
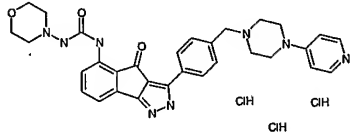
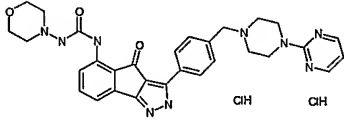
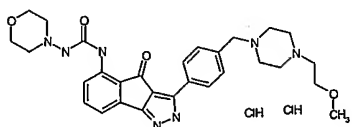
**A82.**

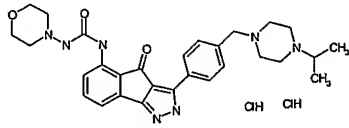
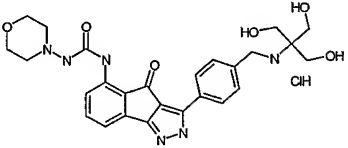
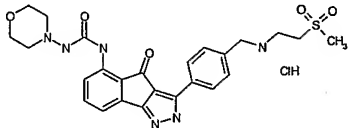
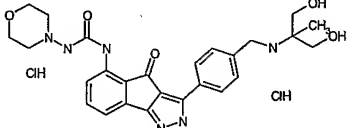
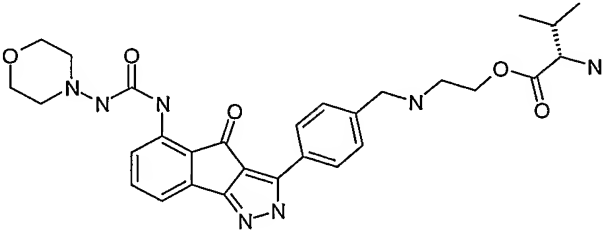
2. The compound of claim 1, wherein n is 1.
3. The compound of claim 1 or 2, wherein R<sub>8</sub> represents a morpholino or piperazine ring.
4. The compound of any of claims 1–3, wherein Q represents substituted or unsubstituted pyrrolidine, substituted or unsubstituted piperazine, or substituted or unsubstituted piperidine.
5. The compound of claim 1, wherein the compound is selected from the following:

B1		
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B2	 <p>Chemical structure of compound B2: A 1,2,3,4-tetrahydropyrimidin-5(1H)-one core substituted at position 2 with a 4-(2-hydroxyethyl)phenyl group and at position 4 with a 4-(2-hydroxyethyl)phenyl group. The 4-(2-hydroxyethyl)phenyl group is connected to the core via a methylene bridge.</p>	
B3	 <p>Chemical structure of compound B3: A 1,2,3,4-tetrahydropyrimidin-5(1H)-one core substituted at position 2 with a 4-(2-hydroxyethyl)phenyl group and at position 4 with a 4-(2-hydroxyethyl)phenyl group. The 4-(2-hydroxyethyl)phenyl group is connected to the core via a methylene bridge.</p>	
B4	 <p>Chemical structure of compound B4: A 1,2,3,4-tetrahydropyrimidin-5(1H)-one core substituted at position 2 with a 4-(2-hydroxyethyl)phenyl group and at position 4 with a 4-(2-hydroxyethyl)phenyl group. The 4-(2-hydroxyethyl)phenyl group is connected to the core via a methylene bridge.</p>	
B5	 <p>Chemical structure of compound B5: A 1,2,3,4-tetrahydropyrimidin-5(1H)-one core substituted at position 2 with a 4-(2-hydroxyethyl)phenyl group and at position 4 with a 4-(2-hydroxyethyl)phenyl group. The 4-(2-hydroxyethyl)phenyl group is connected to the core via a methylene bridge.</p>	
B6	 <p>Chemical structure of compound B6: A 1,2,3,4-tetrahydropyrimidin-5(1H)-one core substituted at position 2 with a 4-(2-hydroxyethyl)phenyl group and at position 4 with a 4-(2-hydroxyethyl)phenyl group. The 4-(2-hydroxyethyl)phenyl group is connected to the core via a methylene bridge.</p>	

B7	
B8	
B9	
B10	
B11	

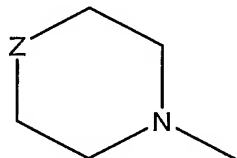
B12	
B13	
B14	
B15	
B16	

B17	
B18	
B19	
B20	
C2	

6. The compound of any of claims 1–4, wherein Q represents a substituted secondary amino substituent, substituted tertiary amino substituent, or substituted nitrogen-containing heterocycle.

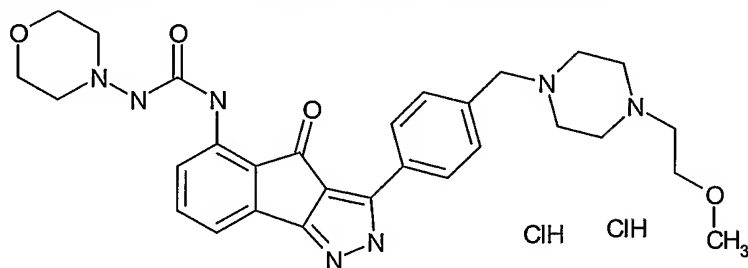
7. The compound of claim 6, wherein one or more substituents, independently for each occurrence, are selected from alkyl, oxo, acyl amino, hydroxyl, carbonyl, sulfonyl, ester, amide, NR'', hydroxy alkyl, alkoxy alkyl, aryl, heterocyclyl, cycloalkyl, and oligo(ethylene glycol).

- 5 8. The compound of any of claims 1–4, wherein R<sub>8</sub> has the structure:



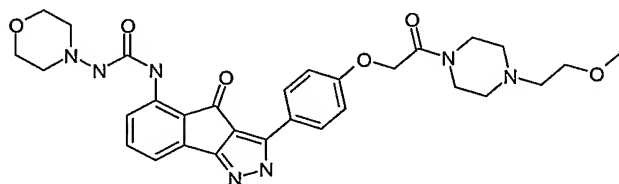
where Z represents O or NR'', and  
R'' represents H or lower alkyl.

- 10 9. A compound, or isomeric, prodrug, tautomeric, pharmaceutically acceptable salt, N-oxide, or stereoisomeric form thereof, having the structure:



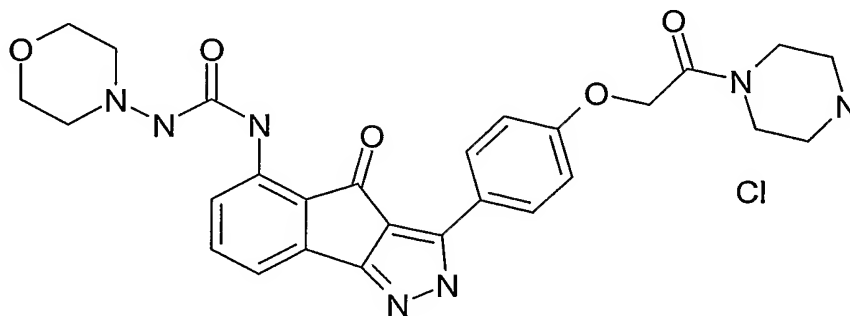
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10. A compound, or isomeric, prodrug, tautomeric, pharmaceutically acceptable salt, N-oxide, or stereoisomeric form thereof, having the structure:



20

11. A purified or synthetic compound, or isomeric, prodrug, tautomeric, pharmaceutically acceptable salt, N-oxide, or stereoisomeric form thereof, having the structure:



- 5 12. A pharmaceutical composition comprising a pharmaceutically acceptable excipient and a compound of any of claims 1 -11.
13. A method of treating a hyperproliferative disorder, comprising administering to an animal a compound of any of claims 1-11.
14. A method of inhibiting proliferation of a cell, comprising contacting the cell  
10 with a compound of any of claims 1-11.
15. A method of treating a viral infection, comprising administering to a mammal a compound of any of claims 1-11.
16. The method of claim 15, wherein the viral infection is caused by a human immunodeficiency virus (HIV).
- 15 17. A method for the treatment or prevention of alopecia induced by chemotherapy or radiation therapy, comprising administering to a mammal a compound of any of claims 1-11 conjointly with one or more chemotherapeutics or radiation therapy.



18. A method of treating a hyperproliferative disorder, comprising administering to an animal a compound of claim 11.
19. A method of inhibiting proliferation of a cell, comprising contacting the cell with a compound of claim 11.
- 5 20. A method of treating a viral infection, comprising administering to a mammal a compound of claim 11 or a composition containing a therapeutically effective amount of such compound.
21. The method of claim 20, wherein the viral infection is caused by a human immunodeficiency virus (HIV).
- 10 22. The use of a compound of any of claims 1-11 for the manufacture of a medicament.
23. The use of claim 22, wherein the medicament is a pharmaceutical for the treatment or prevention of a disorder selected from a hyperproliferative disorder, a  
15 viral infection, chemotherapy-induced alopecia, and a disease associated with cyclin-dependent kinase activity.
24. A compound of any of claims 1-11, for use in the treatment of a disorder.
- 20 25. The compound of claim 24, wherein the disorder is selected from a hyperproliferative disorder, a viral infection, chemotherapy-induced alopecia, and a disease associated with cyclin-dependent kinase activity
26. A method of inhibiting cyclin-dependent kinase comprising administering to a host in need of such treatment a therapeutically effective amount of a compound of  
25 any of claims 1-11 or a composition containing a therapeutically effective amount of such compound.

27. A method of treating cyclin-dependent kinase associated disorders comprising administering to a host in need of such treatment a therapeutically effective amount of a compound of any of claims 1-11 or a composition containing a therapeutically effective amount of such compound.